

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**SITE SERVICES AREA
CITGO Petroleum Corporation
Sulphur, Calcasieu Parish, Louisiana
Agency Interest Number: 1250
Activity Number: PER19960011
Draft Permit 3010-V0**

I. APPLICANT:

Company:

CITGO Petroleum Corporation
P. O. Box 1562
Lake Charles, Louisiana 70602

Facility:

Site Services Area
4401 Hwy. 108 S, Sulphur, Calcasieu Parish, Louisiana
Approximate UTM coordinates are 468.50 kilometers East and 3338.50 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

CITGO Petroleum Corporation operates the Site Services Area at the Lake Charles Manufacturing Complex (LCMC) located in Sulphur, Louisiana. The Site Services Area is a newly created Title V Area including cooling towers, flares and other miscellaneous sources.

The facility has several state permits that will remain effective until replaced by a Part 70 permit. These include:

Permit #	Units or Sources	Date Issued
220	Fuel Oil Conversion	10/30/73
254	Fuel Oil Conversion (1.0% Sulfur)	12/18/73
310	LDPE Expansion	May 1974
311	Reactivation of Deasphalting Unit	5/2/74

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Permit #	Units or Sources	Date Issued
456	LDPE Expansion	May 1975
737	Modification-"D" Topping Unit	5/20/77
796	Polyethylene Plant Expansion	9/7/77
1168R	New "C" Reformer and Refinery Mod.	8/10/79
1594	New Coker, Unicracker, and Refinery Modification	7/27/81
1770T	Use TAC monitoring sites (alter permit 254)	9/22/82
0520-00016-01	ENCON I Project	11/10/88
2003(M-1)	Isomerization Unit	2/21/01
2131	C Reformer Benzene Recovery	4/20/92
2173	Inert Gas Handling	1/4/93
2215	Sour Water Surge Tank (CIT-CON)	9/14/93
2403	MEK Solvent Dehydration	8/10/96
2595	C Topper/Straight Run PPR	2/12/99
2615(M-1)	C Reformer Optimization Project	10/24/01
2204	Steam Enhancement Project	4/22/93

Several Part 70 permits addressing portions of the facility have already been issued. These include:

Permit #	Units or Sources	Date Issued
2715-V0	Mixed Xylenes Unit	12/10/01
2714-V1	Coker I Unit	7/29/03
2797-V0	CVEP	9/9/02
2810-V0	Tier 2	10/1/02
2908-V0	Cat Area	4/28/05
74-V0	ALCOH	12/22/04
2935-V0	AAT Area	10/17/05
2796-V3	Logistics	9/16/05

Finally, several applications for initial Part 70 permits addressing the remaining portions of the facility are still under review by the department. These include:

Permit #	Units or Sources
3009-V0	CLAW Plant
2920-V0	Reformer Area
2930-V0	Thermal Area

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III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

An initial Part 70 and reconciliation permit application and Emission Inventory Questionnaire (EIQ) dated October 2, 1996 and additional information dated October 14, 2005, November 30, 2005 and December 13, 2005 were received requesting an initial Part 70 operating permit.

A notice requesting public comment on the permit was published in the *Advocate*, Baton Rouge, Louisiana, on XXX XX, 2006 and *The Southwest Daily News*. The public notice was sent to persons included in the Office of Environmental Services Public Notice Mailing List on XXX XX, 2006. The proposed permit was also submitted to US EPA Region VI.

Project description

CITGO owns and operates a petroleum refinery in Sulphur, Louisiana. LCMC processes both domestic and foreign crude oils into gasoline, diesel fuel, turbine fuel, kerosene, propylene, coke, lube oils, wax, benzene, propane, ethane, sulfur, sulfuric acid, and other miscellaneous products. CITGO is classified under SIC Code 2911 for petroleum refineries, 2819 for elemental sulfur production (a by-product of the refining process), and 2869 for industrial organic chemicals production. To refine the crude, LCMC utilizes crude topping and crude vacuum units, petroleum coking units, fluid catalytic cracking units, an alkylation unit, an isomerization unit, a hydrocracking unit, a sulfolane unit, a mixed xylenes extraction unit, amine treatment units, catalytic reformers, hydrodesulfurization units, sulfur recovery units, tail gas units, a sulfuric acid plant, lube oil and wax extraction/separation units, and associated infrastructure including plant utilities.

LCMC is divided into seven (7) main operating "Areas", which are further subdivided into units. The following table shows the major area categories and the relationship among the areas.

Title V Area	Description
Site Services 3010-V0	Newly created Title V Area including cooling towers, flares and other miscellaneous sources.
CLAW Area 3009-V0	Formerly titled CIT-CON, includes oil and wax extraction/separation units, storage tanks, flare, a wastewater treating unit, and other miscellaneous sources.
Thermal 2930-V0	Includes the crude, vacuum, and naphtha topping units, powerhouse boilers, Coker I Unit, and other miscellaneous sources.
Reformer 2920-V0	Includes furnaces, Coker II Unit, CCR Vent and other miscellaneous sources.

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Title V Area	Description
AAT 2935-V0	Includes Sulfur Recovery Units, Tail Gas Units, Acid Plant, Thermal Oxidizer, sour water stripping units, amine units, the product treating plant, and other miscellaneous sources.
CAT 2908-V0	Includes FCCU Regenerator Vents, C-4 Recovery Unit, and other miscellaneous sources.
Logistics 2796-V3	Includes storage tanks, wastewater emissions, marine loading and Waste Water Treatment Plant (WWTP) flares, and other miscellaneous sources.

There are no physical changes in this Initial Title V Permit. This permit changes the following:

1. Consolidate and replace existing air emission permits.
2. Identify and reconcile all existing air emission sources.
3. Incorporate requirements of the NSR Consent Decree to which CITGO LCMC became subject on January 27, 2005.
4. Obtain an air emissions cap for flares and cooling towers.

Estimated emissions in tons per year are as follows:

Pollutant	Proposed*
PM ₁₀	170.12
SO ₂	3002.98
NO _x	222.84
CO	943.36
VOC	3201.30

*Grandfathered or not permitted.

MACT requirements

The facility meets MACT requirement by complying with the Louisiana Refinery MACT Determination through the Louisiana Fugitive Emission Consolidation program for the project fugitives. The Site Services Area will comply with the appropriate MACT requirements.

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Air Modeling Analysis

Facility-wide Louisiana Toxic Air Pollutant (LTAP) dispersion modeling is required for applicable LTAP compounds with emissions above the Minimum Emission Rate for the Site Services Area. Modeling submission with the Air Toxics Compliance Plan was submitted under LAC 33:III.Chapter 51.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

The insignificant activities associated with this permit are in the Emission Point List Table.

IV. Regulatory Analysis

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms conditions and standards are provided in the Facility Specific Requirements Section of the proposed permit.

Wetlands

This permit does not include any impacted wetlands.

V. Permit Shields

Shield 1

If the permittee submits a timely and complete application for renewal, the existing permit will be considered as administratively continued per La. R.S. 30:2023.C. and La. R.S. 49:961.B. In such case, the terms and conditions of this permit shall remain in force until a final permit decision for permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to LAC 33:III.519.A, and as required by LAC 33:III.519.B, the applicant fails to submit by the deadline specified in writing by the permitting authority any additional information identified as being needed to process the application.

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Fugitive Emission Monitoring (Streamlining)

Shield 2

LCMC requests a permit shield that states compliance with the requirements of the monitoring program identified in the most recently approved version of the "Louisiana Fugitive Emission Program Consolidation – Source Notice and Agreement – CITGO Petroleum Corporation – Lake Charles Manufacturing Complex – Calcasieu Parish Louisiana" constitutes full compliance with all applicable regulatory leak detection and repair program for the sources covered by this Part 70 permit. The applicable regulatory LDAR program for the sources covered in this Part 70 permit application

LAC 33:III.905 Shield (Streamlining)

Shield 3

Where a specific regulatory work practice or operational standard applies to an affected facility, compliance with the applicable regulatory work practice or operational standard demonstrates compliance with LAC 33:III.905.

Semi-Annual Reporting

Shield 4

Semi-annual reporting periods required by 40 CFR Part 63 Subpart CC (RMACT) will be satisfied by the submission of semi-annual reports on a calendar basis (January 1 through June 30 and July 1 through December 31) for consistency with the Title V reporting schedule.

Process Drain Shield (Streamlining)

Shield 5

Process drains subject to LAC 33:III.2122 and either 40 CFR 60 Subpart QQQ, 40 CFR Part 61 Subpart FF or 40 CFR Part 63 Subpart CC shall demonstrate compliance with LAC 33:III.2122 by meeting the applicable control, inspection and repair requirements of 40 CFR 60 Subpart QQQ, 40 CFR Part 61 Subpart FF or 40 CFR Part 63 Subpart CC.

NSPS QQQ and NESHAP FF Reporting Shield (Streamlining)

Shield 6

The reporting requirements for the Semi-annual Report required by 40 CFR Part 60 Subpart QQQ (§§ 60.698(b)(1)(c), and (d), the Quarterly Report required by 40 CFR Part 61 Subpart FF (§§ 61.357(d)(6), (d)(7), and the Annual Report of Required Inspections (§ 61.357(d)(8)) are satisfied by a consolidated report that includes all required reporting provisions that is submitted on a semi-annual basis. In addition CITGO reserves the option to submit the consolidated report on a quarterly basis as an alternative to the semi-annual basis.

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VI. Periodic Monitoring

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the proposed permit.

VII. Applicability and Exemptions of Selected Subject Items

See Permit.

VIII. Streamlined Requirements

None.

IX. Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) - A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Hydrogen Sulfide (H₂S) - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year of NO_x or VOC for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.